

TECANAT® black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PC (Polycarbonate)

Colour

black

Density

1.19 g/cm³

Main features

- excellent impact strength
- excellent strength and stiffness
- excellent dimensional stability
- good machinability

Target Industries

- aircraft and aerospace technology
- food processing
- packaging and paper machinery

| Mechanical properties | condition | value | | test method | comment |
|---------------------------------------|------------------------------|----------------------|-----------|-------------|------------------------------|
| Modulus of elasticity (tensile test) | @ 73 °F | 320,000 | psi | ASTM D 638 | |
| Tensile strength at yield | @ 73 °F | 9,000 | psi | ASTM D 638 | |
| Elongation at break (tensile test) | @ 73 °F | 50 | % | ASTM D 638 | |
| Flexural strength | @ 73 °F | 13,000 | psi | ASTM D 790 | |
| Modulus of elasticity (flexural test) | @ 73 °F | 305,000 | psi | ASTM D 790 | |
| Compression strength | @1% strain, 73 °F | 2,900 | psi | ASTM D 695 | |
| Compression strength | @10% strain, 73 °F | 12,000 | psi | ASTM D 695 | |
| Compression modulus | @ 73 °F | 295,000 | psi | ASTM D 695 | |
| Impact strength (Izod) | @ 73 °F | 1.25 | ft-lbs/in | ASTM D 256 | |
| Rockwell hardness | @ 73 °F M Scale (R Scale) | 70 (120) | | ASTM D 785 | |
| Thermal properties | condition | value | | test method | comment |
| Vicat softening point | | 309 | °F | ASTM D 1525 | 1) (1) Injection molded data |
| Deflection temperature | @264 psi | 270 | °F | ASTM D 648 | 2) (2) Injection molded data |
| Service temperature | Intermittent | 275 | °F | - | 3) (3) per UL746B |
| Service temperature | Long Term | 250 | °F | - | |
| Electrical properties | condition | value | | test method | comment |
| volume resistance | | 1.0*10 ¹⁶ | Ω*cm | ASTM D 257 | 1) (1) Injection molded data |
| Dielectric strength | | 378 | V/mil | ASTM D 149 | 2) (2) Injection molded data |
| Other properties | condition | value | | test method | comment |
| Moisture absorption | @ 24 hrs, 73 °F | 0.08 | % | ASTM D 570 | 1) (1) Injection molded data |
| Flammability (UL94) | | HB | | - | 2) (2) @ 1.50 mm thickness |
| | | | | | Injection molded data |

→ Resin specification:
ASTM D3935-09 PC0150B34840
Shapes specification:
ASTM D6098-10 S-PC0111

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